

dissector 42 where it is converted into an electronic format in real time. The remaining analyses associated with a urinalysis may be performed in a second chamber or in a contiguous region of the same chamber 20. A more complete description of the performance of urine analysis using this apparatus 10 may be found in ~~applicant's co-pending application number~~ ~~(Attorney's docket number UFB-010)~~ United States Patent No. 6,004,821.

Although this invention has been shown and described with respect to the detailed embodiments thereof, it will be understood by those skilled in the art that various changes in form and detail thereof may be made without departing from the spirit and the scope of the invention. For example, the best mode of the apparatus 10 is described as being used with a particular sample container 18. Alternative containers may be used with the present invention apparatus. In addition, the field illuminator is described as having a light diverting prism 60 and a plurality of lens' 52, 56, and 67. Different filter positions, or no filters at all, may increase or eliminate the need for certain light diverting prisms and lens'.

What is claimed is:

1-claim:

1. An apparatus for testing a sample of biologic fluid quiescently residing within a chamber, said apparatus comprising:

5 a field illuminator for selectively illuminating a field of the sample, said field having a known or ascertainable area;

a positioner, which is operable to selectively change the position of one of the chamber or said field illuminator relative to the other of the chamber or said field illuminator, thereby permitting selective illumination of a plurality of said sample fields within the chamber;

10 means for determining one of a through-plane thickness or a volume of each said sample field; and

an image dissector, for converting an image of light passing through or emanating from each said field of the sample into an electronic data format useful for test purposes.

15 2. An apparatus according to claim 1, further comprising means for retrieving information concerning the chamber which information is used in the performance of one or more tests on the biologic fluid sample by said apparatus.

20 3. An apparatus according to claim 2, wherein said means for retrieving information includes a label reader for reading a label relating to the chamber.

4. An apparatus according to claim 3, wherein said label reader optically reads labels.

25 5. An apparatus according to claim 3, wherein said label reader magnetically reads labels.

6. An apparatus according to claim 3, further comprising:
a programmable analyzer having a central processing unit;
wherein said label reader transfers said information to said programmable analyzer, and
said programmable analyzer interprets said information, identifying said one or more tests to
be performed on the biologic fluid sample.

7. An apparatus according to claim 6, wherein said programmable analyzer contains a
plurality of instructions for performing said one or more tests.

8. An apparatus according to claim 7, wherein said plurality of instructions are contained
remote from said programmable analyzer and are accessed through said programmable
analyzer.

9. An apparatus according to claim 7, wherein said plurality of instructions includes
means for controlling said field illuminator and said positioner.

10. An apparatus according to claim 9, wherein said positioner includes means for
spatially locating said chamber relative to said field illuminator;
wherein said means for spatially locating said chamber relative to said field illuminator
enables said field illuminator to be aligned with any particular spatial location within said
chamber.

11. An apparatus according to claim 10, wherein a coordinate address is used to describe
particular spatial locations within said chamber.

12. An apparatus according to claim 11, wherein said information retrieved by said label
reader relates to features within the chamber.